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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,868	10/15/2003	Kenneth Brakeley Welles II	132361	5772
41838 7590 05/16/2008 GENERAL ELECTRIC COMPANY (PCPI) C/O FLETCHER YODER P. O. BOX 692289 HOUSTON, TX 77269-2289				
			EXAMINER	
			BEAMER, TEMICA M	
			ART UNIT	PAPER NUMBER
			2617	
			MAIL DATE	DELIVERY MODE
			05/16/2008 PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/685,868

**Applicant(s)**

WELLES ET AL.

**Examiner**

TEMICA M. BEAMER

**Art Unit**

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 2/29/2008 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Martin, U.S. Patent No. 4,622,441 taken singly and in combination as described below.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6, 10, 12-16, 17, 21 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Martin.

Regarding claims 1, 10, 12, 21 and 23, Martin discloses a method/apparatus of facilitating communication in an electrical power network having a complex impedance, comprising: modifying said complex impedance; and determining whether said modifying affected a quality of said communication (col. 1, line 62-col. 2, line 6, col. 2, lines 58-67).

Regarding claims 2 and 13, Martin discloses wherein said modifying alters a characteristic of a null in said electrical power network (col. 7, line 59-col. 8, line 3).

Regarding claims 3 and 14, Martin discloses wherein said communication is conducted in a signal frequency band, and wherein said modifying improves said quality in said signal frequency band (abstract and col. 4, lines 22-26).

Regarding claims 4 and 15, Martin discloses wherein said modifying is performed in response to a determination that said quality is below an acceptable threshold (i.e., undesirable noise) (col. 1, line 66-col. 2, line 7).

Regarding claims 5 and 16, Martin discloses wherein said modifying and determining is repeated for a plurality of values for said complex impedance, and wherein said method further comprises determining which of said plurality of values yields a best level of quality (col. 49-57).

Regarding claims 6 and 17, Martin discloses wherein said method/apparatus is employed by a device selected from the group consisting of a transmitter, a receiver, and a transceiver (col. 1, lines 14-29).

Regarding claims 21 and 23, Martin discloses facilitating communication in an electrical power network having a complex impedance, comprising: a module for determining a quality of communication in said electrical power network; and a module for controlling a circuit to modify said complex impedance if said quality is below an acceptable threshold (col. 1, line 62-col. 2, line 2, col. 2, lines 58-67, col. 1, line 66-col. 2, line 7).

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Hill et al (Hill), U.S. Patent No. 6,747,569.

Regarding claims 8 and 19, Martin discloses the method/apparatus of claims 1 and 12 as described above. Martin, however, fails to disclose wherein said quality is gauged by a bit error rate of said communication.

Hill discloses this limitation (col. 1, line 66-col. 2, line 9).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Martin with such a technique in order to determine if the communication is of a good quality.

6. Claims 7, 9, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Bergman, U.S. Patent No. 4,866,784.

Regarding claims 7, 9, 18 and 20, Martin discloses the method/apparatus of claims 1 and 12 as described above. Martin, however, fails to disclose wherein the method is employed by a transceiver that failed to receive an acknowledgement of a message that said transceiver previously transmitted over said electrical power network and wherein said quality is gauged by whether said communication is acknowledged by a receiver coupled to said electrical power network.

Bergman discloses these limitations (col. 11, lines 48-67). At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Martin with the teachings of Bergman for the purpose of maintaining proper system function.

7. Claims 11, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Parkvall et al (Parkvall), U.S. Patent Pub. No. 2002/0080719.

Regarding claims 11, 22 and 24, Martin discloses a method/apparatus of facilitating communication in an electrical power network having a complex impedance, comprising: modifying said complex impedance; and determining whether said modifying affected a quality of said communication (col. 1, line 62-col. 2, line 6, col. 2, lines 58-67).

Martin, however, fails to disclose wherein after the quality of the network has improved, retransmitting the communication.

Parkvall discloses this limitation (0057). At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Martin with the teachings of Parkvall for the purpose of ensuring the communication was properly received.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TEMICA M. BEAMER whose telephone number is

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(571)272-7797. The examiner can normally be reached on Monday-Thursday (alternate Fridays) 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Temica M. Beamer/  
Primary Examiner, Art Unit 2617